



*Commonwealth of Massachusetts*

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# ACTUARIAL VALUATION REPORT

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**As of January 1, 1998**

**for the**

**Franklin County**

**Contributory Retirement System**

**Public Employee Retirement  
Administration Commission**

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# FRANKLIN COUNTY ACTUARIAL VALUATION REPORT, 1/1/1998

## SECTION I INTRODUCTION AND CERTIFICATION

This report presents the results of the actuarial valuation of the Franklin County Contributory Retirement System. The valuation was performed as of January 1, 1998 pursuant to Chapter 32 of the General Laws of the Commonwealth of Massachusetts.

It is our opinion that the actuarial assumptions used in this report are each reasonably related to plan experience and expectations and represent our best estimate of anticipated experience under the system.

This valuation was based on member data as of December 31, 1997 which was supplied by the retirement board. Such tests as we deemed necessary were performed on the data to ensure accuracy. Asset information as of December 31, 1997 was provided in the Annual Statement for the Financial Condition as submitted to this office in accordance with G.L. c. 32, ss. 20(5)(h), 23(1)(c) and 23(2)(e).

In our opinion, this report represents an accurate appraisal of the actuarial status of the Franklin County Contributory Retirement System performed in accordance with generally accepted actuarial principles and practices relating to pension plans.

Respectfully submitted,  
Public Employee Retirement  
Administration Commission

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JAMES R. LAMENZO  
Member of the American Academy of Actuaries  
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ROBERT F. STALNAKER  
Executive Director

Dated: February 3, 1999

# FRANKLIN COUNTY ACTUARIAL VALUATION REPORT, 1/1/1998

## SECTION II SUMMARY DISCUSSION

### PART A Costs under Current Valuation

The results of the January 1, 1998 actuarial valuation are as follows:

Total Normal Cost	\$3,078,795
Employee Contributions	<u>1,734,716</u>
Net Normal Cost	<u>\$1,344,079</u>
Total Actuarial Liability	\$46,748,932
Assets	<u>30,578,653</u>
Unfunded Actuarial Liability	<u>\$16,170,279</u>

Please see page 6 for more detail of these amounts.

The appropriation for FY99, based upon the results of this valuation, is shown below.

### 22(D) Current Funding Schedule for the Fiscal Yr. beginning July 1, 1998

	<u>DOLLAR AMOUNT</u>	<u>PERCENT OF PAYROLL</u>
Normal Cost (including interest, administrative exp.)	\$1,658,924	7.9%
Amortization of Liability due to the ERI (11 year level)	27,853	0.1%
Amortization of Unfunded Actuarial Liability (30 year 4.5% incr.)	<u>926,649</u>	<u>4.5%</u>
Funding Schedule Amount	<u>\$2,613,426</u>	<u>12.5%</u>

All amounts assume appropriations will be made July 1 and January 1.

# FRANKLIN COUNTY ACTUARIAL VALUATION REPORT, 1/1/1998

## SECTION II SUMMARY DISCUSSION (Continued)

### PART B Comparison with Prior Valuation

The last full valuation was performed by KPMG Peat Marwick as of January 1, 1990. The calculations in both reports were based on similar assumptions. Below we have shown the comparison between the KPMG valuation as of January 1, 1990 and the valuation completed by PERAC as of January 1, 1998.

	PERAC <u>1/1/98</u>	KPMG <u>1/1/90</u>	Increase (Decrease)	Increase (Decrease)
Total Normal Cost	\$3,078,795	\$1,226,925	\$1,851,870	150.9%
Employee Contributions	<u>1,734,716</u>	<u>771,446</u>	<u>963,270</u>	<u>124.9%</u>
Net Normal Cost	<u>\$1,344,079</u>	<u>\$455,479</u>	<u>\$888,600</u>	<u>195.1%</u>
Actuarial Liability				
Actives	\$25,666,365	\$10,910,557	\$14,755,808	135.2%
Retirees and Inactives	<u>21,082,567</u>	<u>8,998,557</u>	<u>12,084,010</u>	<u>134.3%</u>
Total	\$46,748,932	\$19,909,114	\$26,839,818	134.8%
Assets	30,578,653	11,034,406	19,544,247	177.1%
Unfunded Actuarial Liability	<u>\$16,170,279</u>	<u>\$8,874,708</u>	<u>\$7,295,571</u>	<u>82.2%</u>
Funded Ratio	<u>65.4%</u>	<u>55.4%</u>	<u>10.0%</u>	

We have shown below a comparison of the number of members, payroll amounts, average age and average service.

	PERAC <u>1/1/98</u>	KPMG <u>1/1/90</u>	% Difference
<u>Actives</u>			
Number	1,492	896	66.5%
Total Payroll	\$20,940,446	\$10,668,000	96.3%
Average Salary	\$14,035	\$11,906	17.9%
Average Age	44.0	N/A	N/A
Average Service	6.1	N/A	N/A

# FRANKLIN COUNTY ACTUARIAL VALUATION REPORT, 1/1/1998

## SECTION II SUMMARY DISCUSSION (Continued)

### PART B Comparison with Prior Valuation (continued)

	PERAC <u>1/1/98</u>	KPMG <u>1/1/90</u>	% <u>Difference</u>
<u>Retirees and Survivors</u>			
Number	315	290	8.6%
Total Benefits*	\$1,931,498	\$1,080,740	78.7%
Average Benefits*	\$6,132	\$3,727	64.5%
Average Age	72.4	N/A	N/A

\*excluding State reimbursed COLA

Since the last valuation was performed 8 years ago, it is difficult to compare the valuation results. Both the number of active members and pay have increased significantly since the last valuation, but average pay has increased more modestly. Since we know there are approximately 400 part time members, we suspect this may be due to many part time members being omitted from the prior valuation. We anticipate that the system will perform valuations on a more regular basis going forward.

### PART C Considerations for the Future

The funding schedule presented in this report amortizes the unfunded actuarial liability through 2028 with payments increasing at 4 1/2%.

Chapter 17 of the Acts of 1997 revised the manner in which Cost of Living Adjustments (COLA) are granted to public pension retirees. If a system adopts the COLA provisions and the Retirement Board approves a COLA for a given year, all retirees of the system would receive annual COLA increases up to 3.0% based on the Consumer Price Index used in determining Cost of Living Adjustments under Social Security.

The basis on which the COLA will be applied is \$12,000. The system would pay for any COLA granted after 1997.

Since the system has adopted Chapter 17, the 1998 valuation amounts reflect the impact of the COLA legislation. The figures for the prior valuation do not reflect this cost.

We are available to work with you in determining alternative funding schedules at your request.

# FRANKLIN COUNTY ACTUARIAL VALUATION REPORT, 1/1/1998

## SECTION II SUMMARY DISCUSSION (Continued)

### PART D Other Information Available in this Report

The valuation results by type of benefit are on page 6. On page 7 is the development of the required appropriation amounts. On page 8 is the updated current funding schedule based on the Franklin County Retirement Board's acceptance of section 22D.

For purposes of filing financial statements, the Governmental Accounting Standards Board (GASB) issued Statement No. 25 in November, 1994. The requirements of statement 25 are effective for periods beginning after June 15, 1996. The actuarial information required by this statement is on page 9 of this report.

In addition, we have included a summary of asset information on page 10. For purposes of developing the Unfunded Actuarial Liability, we have used the market value of assets. In future years, an actuarial value of assets will be established consisting of a five-year average of market values. This will serve to reflect market values, but will moderate the fluctuations that can occur if an unadjusted market value is used each year.

On pages 11 to 14, demographic information regarding the members of the Franklin County System is presented. These charts display age, service and salary information for active members and age and benefit information for retirees and survivors.

A description of the funding method used in calculating valuation results is on page 15, and the actuarial assumptions used are on pages 16 and 17.

A brief summary of plan provisions appears on pages 18 to 22, followed by a glossary of actuarial terminology on pages 23 to 24.

# FRANKLIN COUNTY ACTUARIAL VALUATION REPORT, 1/1/1998

## SECTION III SUMMARY OF VALUATION RESULTS

A. Number of Members on Current Valuation Date	
1. Active Members	1,492
2. Vested Terminated Members	19
3. Retired Members and Survivors	<u>315</u>
Total	1,826
 B. Total Regular Compensation of Active Members	 \$20,940,446
 C. Normal Cost	
1. Superannuation	\$1,630,383
2. Termination	295,991
3. Disability	766,172
4. Death	<u>386,249</u>
Total Normal Cost	\$3,078,795
Employee Contribution	<u>1,734,716</u>
Net Employer Normal Cost	<u>\$1,344,079</u>
 D. Actuarial Liability	
1. Superannuation	\$20,539,309
2. Termination	694,777
3. Disability	2,913,246
4. Death	<u>1,519,033</u>
Total Actives	\$25,666,365
Vested Terminated Members	1,960,498
Non-Vested Terminated Members	650,293
 Retirees and Survivors	 <u>18,471,776</u>
Total Actuarial Liability	\$46,748,932
 Assets	 <u>30,578,653</u>
 Unfunded Actuarial Liability	 <u><u>\$16,170,279</u></u>
Funded Ratio (Ratio of Assets to Actuarial Liability)	65.4%



FRANKLIN COUNTY ACTUARIAL VALUATION REPORT, 1/1/1998

SECTION IV  
APPROPRIATION DEVELOPMENT FOR THE FISCAL YEAR 1999

Part A. Derivation of Appropriation

Costs under Current Funding Schedule

1. a. Normal Cost as of January 1, 1998	\$1,344,079
b. For FY99	1,429,764
c. Administrative Expense	229,160
d. Total Employer Normal Cost	1,658,924
2. a. Unfunded Actuarial Liability as of January 1, 1998	\$15,972,294
b. FY99 amortization payment (30 year increasing at 4 ½%)	926,649
3. a. Liability due to ERI as of January 1, 1998	\$197,985
b. FY99 amortization payment (11 year level)	27,853
4. Total FY 99 Payment [Sum of 1(d), 2(b) and 3(b)]	\$2,613,426

All amounts assume appropriations will be made July 1 and January 1.

FRANKLIN COUNTY ACTUARIAL VALUATION REPORT, 1/1/1998

SECTION IV  
APPROPRIATION DEVELOPMENT FOR THE FISCAL YEAR 1999 (Continued)

Part B Current 22D Amortization Schedule

<i><b><u>Fiscal</u></b></i> <i><b><u>Year</u></b></i>	<i><b><u>Normal</u></b></i> <i><b><u>Cost</u></b></i>	<i><b><u>Amort of</u></b></i> <i><b><u>UAL</u></b></i>	<i><b><u>Amort of</u></b></i> <i><b><u>ERI</u></b></i>	<i><b><u>Total</u></b></i> <i><b><u>Cost</u></b></i>	<i><b><u>BOFY</u></b></i> <i><b><u>Balance</u></b></i>
1999	1,658,924	926,649	27,853	2,613,426	16,857,517
2000	1,750,165	968,348	27,853	2,746,366	17,275,460
2001	1,846,424	1,011,924	27,853	2,886,201	17,684,589
2002	1,947,977	1,057,460	27,853	3,033,290	18,082,158
2003	2,055,116	1,105,046	27,853	3,188,015	18,465,101
2004	2,168,147	1,154,773	27,853	3,350,773	18,829,995
2005	2,287,395	1,206,738	27,853	3,521,986	19,173,029
2006	2,413,202	1,261,041	27,853	3,702,096	19,489,965
2007	2,545,928	1,317,788	27,853	3,891,569	19,776,099
2008	2,685,954	1,377,088	27,853	4,090,896	20,026,214
2009	2,833,682	1,439,057	27,853	4,300,592	20,234,533
2010	2,989,534	1,503,815		4,493,349	20,394,665
2011	3,153,959	1,571,487		4,725,445	20,529,168
2012	3,327,427	1,642,203		4,969,630	20,603,146
2013	3,510,435	1,716,103		5,226,538	20,608,218
2014	3,703,509	1,793,327		5,496,836	20,535,142
2015	3,907,202	1,874,027		5,781,229	20,373,739
2016	4,122,098	1,958,358		6,080,456	20,112,807
2017	4,348,813	2,046,484		6,395,298	19,740,025
2018	4,587,998	2,138,576		6,726,574	19,241,849
2019	4,840,338	2,234,812		7,075,150	18,603,405
2020	5,106,557	2,335,378		7,441,935	17,808,363
2021	5,387,417	2,440,471		7,827,888	16,838,807
2022	5,683,725	2,550,292		8,234,017	15,675,093
2023	5,996,330	2,665,055		8,661,385	14,295,687
2024	6,326,128	2,784,982		9,111,111	12,677,001
2025	6,674,065	2,910,306		9,584,372	10,793,204
2026	7,041,139	3,041,270		10,082,409	8,616,025
2027	7,428,402	3,178,127		10,606,529	6,114,529
2028	7,836,964	3,321,143		11,158,107	3,254,881
2029	8,267,997			8,267,997	0

All amounts assume appropriations will be made July 1 and January 1.

# FRANKLIN COUNTY ACTUARIAL VALUATION REPORT, 1/1/1998

## SECTION V GASB STATEMENT NO. 25 - ACTUARIAL INFORMATION

In November of 1994, GASB issued Statements No. 25, 26 and 27, relating to Financial Reporting and Accounting for Pension Plans. We have included in this report the actuarial information required by Statement No. 25. The requirements of Statement 25 are effective for periods beginning after June 15, 1996.

### **SCHEDULE OF FUNDING PROGRESS**

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL)* (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a % of Cov. Payroll ((b-a)/c)
1/1/98	\$30,578,653	\$46,748,932	\$16,170,279	65.4%	\$20,940,446	77.2%
1/1/90	\$11,034,406	\$19,909,114	\$8,874,708	55.4%	\$10,668,000	83.1%

\*excludes State reimbursed COLA

### **NOTES TO SCHEDULES**

Additional information as of the latest actuarial valuation follows:

Valuation Date	January 1, 1998
Actuarial Cost Method	Individual entry age normal
Amortization method	Increasing amortization payments
Remaining amortization period	30 years
Asset valuation method	Market value
Actuarial assumptions:	
Investment rate of return	8.5%
Projected salary increases	5.5%

# FRANKLIN COUNTY ACTUARIAL VALUATION REPORT, 1/1/1998

## SECTION VI FRANKLIN COUNTY ASSETS 12/31/97

### A. Breakdown of Assets by Investment Type

<u>Type</u>	
Cash and Cash Equivalents	\$2,040,493.03
Fixed Income Securities (Book Value)	14,243,793.99
Equities (Market Value)	11,975,726.69
Commingled Funds	1,576,307.37
Interest Due and Accrued	107,877.77
Accounts Receivable	114,952.62
Accounts Payable	<u>(8,193.00)</u>
TOTAL	\$30,050,958.47

### B. Breakdown of Assets by Fund

Annuity Savings Fund	\$11,058,194.64
Annuity Reserve Fund	2,823,803.52
Military Service Fund	0.00
Pension Fund	4,341,811.69
Expense Fund	0.00
Pension Reserve Fund	<u>11,827,148.42</u>
TOTAL	\$30,050,958.47

C. <u>Market Value of Assets</u>	\$30,578,653.48
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# FRANKLIN COUNTY ACTUARIAL VALUATION REPORT, 1/1/1998

## SECTION VII INFORMATION ON SYSTEM MEMBERSHIP

A critical element of an actuarial valuation is accurate and up-to-date membership information. PERAC conducted an extensive review of actual member information submitted as of 12/31/97 by Franklin County.

### Part A Active Members

	<u>Actives</u>	<u>Vested Terms.</u>
Number of Members	1,492	19
Average Age	44.0	53.2
Average Service	6.1	14.4
Average Salary	\$14,035	\$24,223
Average Annuity Savings Fund Balance	\$6,854.05	\$11,901.19

### Age by Service Distribution of Active Members

#### Years of Service

<i>Present Age</i>	<i>0 - 4</i>	<i>5 - 9</i>	<i>10 - 14</i>	<i>15 - 19</i>	<i>20 - 24</i>	<i>25 - 29</i>	<i>30 +</i>	<b>Total</b>
0-24	36	6						42
25-29	84	20						104
30-34	73	41	13	1				128
35-39	145	106	12	5				268
40-44	121	85	25	9	5	1		246
45-49	90	102	49	14	7	5		267
50-54	48	55	34	16	13	9		175
55-59	33	40	19	13	12	5	3	125
60-64	11	24	14	8	6	4	3	70
65 +	21	29	5	6	2	1	3	67
<b>Total</b>	662	508	171	72	45	25	9	1,492

## FRANKLIN COUNTY ACTUARIAL VALUATION REPORT, 1/1/1998

SECTION VII  
INFORMATION ON SYSTEM MEMBERSHIP (Continued)

Part A Active Members (continued)Salary by Age Distribution of Active Members

<i>Present Age</i>	<i>Number of Participants</i>	<i>Total Salary</i>	<i>Average Salary</i>
0 - 24	42	\$553,341	\$13,175
25 - 29	104	\$1,332,547	\$12,813
30 - 34	128	\$1,824,048	\$14,250
35 - 39	268	\$3,587,225	\$13,385
	1*	\$12,197	\$12,197
40 - 44	246	\$3,435,511	\$13,965
	2*	\$60,000	\$30,000
45 - 49	267	\$4,005,607	\$15,002
	3*	\$71,773	\$23,924
50 - 54	175	\$2,544,187	\$14,538
	4*	\$70,271	\$17,568
55 - 59	125	\$1,883,947	\$15,072
	7*	\$185,995	\$26,571
60 - 64	70	\$1,104,428	\$15,778
	1*	\$30,000	\$30,000
65 +	67	\$669,605	\$9,994
	1*	\$30,000	\$30,000
<b>Total</b>	1,492	\$20,940,446	\$14,035
	19*	\$460,236	\$24,223

\* Vested Terminated Members

Actual Employee Contributions made during 1997: \$1,348,622

FRANKLIN COUNTY ACTUARIAL VALUATION REPORT, 1/1/1998

SECTION VII  
INFORMATION ON SYSTEM MEMBERSHIP (Continued)

Part B Retirees and Survivors

	<i>Superannuation</i>	<i>Accidental Disability</i>	<i>Ordinary Disability</i>	<i>Survivors</i>	<b>Total</b>
Number of Members	268	6	3	38	315
Average Age	73.1	54.3	62.5	71.7	72.4
Avg. Annual Benefit	\$6,892	\$19,737	\$5,926	\$5,210	\$6,925

Benefit by Payment and Retirement Type

	<i>Superannuation</i>	<i>Accidental Disability</i>	<i>Ordinary Disability</i>	<i>Survivors</i>	<b>Total</b>
Total Annuity	\$289,184	\$7,188	\$2,704	\$13,641	\$312,717
Pension from Franklin County	1,324,520	104,711	12,147	129,383	1,570,761
Pension from Other Systems	46,767	0	0	1,254	48,021
COLA	186,716	6,522	2,927	53,654	249,819
<b>Total</b>	\$1,847,187	\$118,421	\$17,778	\$197,932	\$2,181,318

## FRANKLIN COUNTY ACTUARIAL VALUATION REPORT, 1/1/1998

SECTION VII  
INFORMATION ON SYSTEM MEMBERSHIP (Continued)

Part B Retirees and Survivors (continued)Benefit by Age Distribution

<i>Present Age</i>	<i>Number of Members</i>	<i>Total Benefits</i>	<i>Average Benefits</i>
less than 40	1	\$19,475	\$19,475
40 - 44	N/A	N/A	N/A
45 - 49	5	\$56,476	\$11,295
50 - 54	3	\$38,676	\$12,892
55 - 59	11	\$123,950	\$11,268
60 - 64	28	\$248,341	\$8,869
65 - 69	66	\$546,484	\$8,280
70 - 74	70	\$463,342	\$6,619
75 - 79	64	\$336,546	\$5,259
80 - 84	33	\$187,773	\$5,690
85 - 89	25	\$102,660	\$4,106
90 +	9	\$57,595	\$6,399
<b>Totals</b>	315	\$2,181,318	\$6,925



SECTION VIII  
VALUATION COST METHODS

Part A Actuarial Cost Method

The Actuarial Cost Method which was used to determine pension liabilities and costs for benefits payable for the Franklin County Contributory Retirement System for the year beginning January 1, 1998, is known as the Entry Age Normal Cost Method. Under this method the Normal Cost for each active participant on the valuation date is determined as the level percent of salary, which, if paid annually from the date the participant first became a member of the retirement system, would fully fund by retirement, death, disability or termination, the projected benefits which the participant is expected to receive. The Actuarial Liability for each participant is determined as the present value as of the valuation date of all projected benefits which the participant is expected to receive, minus the present value of future annual Normal Cost payments expected to be made to the fund. Since only active members have a Normal Cost, the Actuarial Liability for inactives, retirees and survivors is simply equal to the present value of all projected benefits. The sum of Normal Cost and Actuarial Liability for each participant is equal to the Normal Cost and Actuarial Liability for the Plan. The Unfunded Actuarial Liability is the Actuarial Liability minus current assets.

The Normal Cost for a participant will remain a level percent of salary for each year of participation except for changes in provisions of the Plan or the actuarial assumptions employed in projection of benefits and present value determinations. The Normal Cost for the entire system will also change due to addition of new participants or the retirement, death or termination of participants. The Actuarial Liability for a participant will increase each year to reflect the additional accrual of Normal Cost. It will also change if the Plan provisions or actuarial assumptions are changed.

Differences each year between the actual experience of the Plan and the experience projected by the actuarial assumptions are reflected by adjustments to the Unfunded Actuarial Liability. An experience difference which increases the Unfunded Actuarial Liability is called an Actuarial Loss and one which decreases the Unfunded Actuarial Liability is called an Actuarial Gain.

Part B Asset Valuation Method

Assets are at market value.

# FRANKLIN COUNTY ACTUARIAL VALUATION REPORT, 1/1/1998

## SECTION IX ACTUARIAL ASSUMPTIONS

<u>Rate of Investment Return</u>	8.5% per year
<u>Rate of Salary Increase</u>	5.5% per year
<u>Interest Rate credited to the Annuity Savings Fund</u>	5.5% per year

Mortality Rate                      1983 Group Annuity Mortality Table (gender distinct). This is applicable to both pre-retirement and post-retirement benefits. For disabled members, the mortality rate is assumed to be in accordance with the 1983 Group Annuity Mortality Table (gender distinct) with ages set forward 10 years. It is assumed that 55% of pre-retirement deaths are job-related for Group 1 and 2 members and 90% are job-related for Group 4 members. For members retired under an Accidental (job-related) Disability 40% of deaths are assumed to be from the same cause as the disability.

Rate of Withdrawal                      Based on an analysis of past experience. Sample annual rates are shown below:

<u>Age</u>	<u>Groups 1&amp;2</u>
20	0.0794
30	0.0722
40	0.0515
50	0.0256

No terminations were assumed for Group 4 members

# FRANKLIN COUNTY ACTUARIAL VALUATION REPORT, 1/1/1998

## SECTION IX ACTUARIAL ASSUMPTIONS (Continued)

### Rate of Disability

Based on an analysis of past experience. Sample annual rates are shown below:

<u>Age</u>	<u>Groups 1&amp;2</u>	<u>Group 4</u>
20	0.0006	0.0012
30	0.0011	0.0022
40	0.0024	0.0048
50	0.0061	0.0122

It is also assumed that 55% of disabilities will be job-related for Group 1 and 2 members and 90% will be job-related for Group 4 members.

### Rate of Retirement (Superannuation)

Based on an analysis of past experience. Annual rates are shown below:

<u>Age</u>	<u>Groups 1&amp;2</u>	<u>Group 4</u>
50	0.0000	0.1000
51	0.0000	0.0200
52	0.0000	0.0200
53	0.0000	0.0200
54	0.0000	0.0200
55	0.1000	0.2500
56	0.0500	0.0500
57	0.0500	0.0500
58	0.0500	0.0500
59	0.0500	0.0500
60	0.0500	0.2500
61	0.0500	0.0500
62	0.2500	0.0500
63	0.1000	0.0500
64	0.1000	0.0500
65	0.1000	1.0000
66	0.1000	
67	1.0000	

### Administrative Expenses

An amount of \$229,160 has been included in the Normal Cost for FY99. This amount is assumed to increase by the salary increase assumption each year.

SECTION X  
SUMMARY OF PLAN PROVISIONS

**ADMINISTRATION** : There are 106 contributory Retirement Systems for public employees in Massachusetts. Each system is governed by a retirement board and all boards, although operating independently, are governed by one retirement law, Chapter 32 of the Massachusetts General Laws. This law in general provides uniform benefits, uniform contribution requirements and a uniform accounting and funds structure for all systems.

**PARTICIPATION** : Participation is mandatory for all full-time employees. Eligibility with respect to part-time, provisional, temporary, seasonal or intermittent employment is governed by regulations promulgated by the retirement board, and approved by PERAC. Membership is optional for certain elected officials.

There are 3 classes of membership in the Retirement System:

Group 1 - General employees, including clerical, administrative, technical and all other employees not otherwise classified.

Group 2 - Certain specified hazardous duty positions.

Group 4 - Police officers, firefighters, and other specified hazardous positions.

**MEMBER CONTRIBUTIONS** : Member contributions vary depending on the most recent date of membership:

Prior to 1975 - 5% of regular compensation

1975 - 1983 - 7% of regular compensation

1984 to 6/30/96 - 8% of regular compensation

7/1/96 to present - 9% of regular compensation

1979 to present - an additional 2% of regular compensation in excess of \$30,000.

**RATE OF INTEREST** : Regular Interest on regular deductions made after January 1, 1984 is a rate established by PERAC in consultation with the Commissioner of Banks. The rate is obtained from the average rates paid on individual savings accounts by a representative sample of at least 10 financial institutions.

**RETIREMENT AGE** : The mandatory retirement age for some Group 2 and Group 4 employees is age 65. Most Group 2 and Group 4 members may remain in service after reaching age 65. Group 4 members who are employed in certain public safety positions are required to retire at age 65. There is no mandatory retirement age for employees in Group 1.

SECTION X  
SUMMARY OF PLAN PROVISIONS (Continued)

**SUPERANNUATION RETIREMENT** : A member is eligible for a superannuation retirement allowance (service retirement), upon meeting the following conditions:

completion of 20 years of service, or

attainment of age 55 if hired prior to 1978, or if classified in Group 4, or

hired after 1978, with 10 years of service and age 55.

**AMOUNT OF BENEFIT** : A member's annual allowance is determined by multiplying average salary by a benefit rate related to the member's age and job classification at retirement, and the resulting product by his creditable service. The amount determined by the benefit formula cannot exceed 80% of the employees' highest three year average salary. For veterans as defined in G.L. c. 32, s. 1, there is an additional benefit of \$15 per year for each year of creditable service, up to a maximum of 20 years.

Salary is defined as gross regular compensation.

Average Salary is the average annual rate of regular compensation received during the 3 consecutive years that produce the highest average, or, if greater, during the last three years (whether or not consecutive) preceding retirement.

The Benefit Rate varies with the member's retirement age, but the highest rate of 2.5% applies to Group 1 employees who retire at or after age 65, Group 2 employees who retire at or after age 60, and to Group 4 employees who retire at or after age 55. A .1% reduction is applied for each year of age under the maximum age for the member's group. For Group 2 employees who terminate from service under age 55, the benefit rate for a Group 1 employee shall be used.

**DEFERRED VESTED BENEFIT** : A participant who has completed 10 or more years of creditable service is eligible for a deferred vested retirement benefit. Elected officials and others who were hired prior to 1978 may be vested after 6 years in accordance with G.L. c. 32, s. 10.

The participant's accrued benefit is payable commencing at age 55, or the completion of 20 years, or may be deferred until later at the participant's option.

**WITHDRAWAL OF CONTRIBUTIONS** : If a member is under age 55, member contributions may be withdrawn upon termination of employment. Employees who first become members on or after January 1, 1984, may receive only limited interest on their contributions if they voluntarily terminate their service. Those who leave service with less than 5 years receive no interest; those who leave service with greater than 5 but less than 10 years receive 50% of interest.

SECTION X  
SUMMARY OF PLAN PROVISIONS (Continued)

**DISABILITY RETIREMENT**: The Massachusetts Retirement Plan provides 2 types of disability retirement benefits:

Ordinary Disability:

Eligibility: Non-veterans who become totally and permanently disabled by reason of a non-job related condition before attaining age 55 with at least 10 years of creditable service (or 15 years creditable service in systems in which the local option contained in G.L. c. 32, s.6(1) has not been adopted).

Veterans with ten years of creditable service who become totally and permanently disabled by reason of a non-job related condition prior to reaching "maximum age".

Retirement Allowance: Equal to the accrued superannuation retirement benefit as if the member was age 55. If the member is a veteran, the benefit is 50% of the member's final rate of salary during the preceding 12 months, plus an annuity based upon accumulated member contributions plus credited interest. If the member is over age 55, he or she will receive not less than the superannuation allowance to which he or she is entitled.

Accidental Disability:

Eligibility: Applies to members who become permanently and totally incapacitated for further duty as a result of a personal injury sustained or hazard undergone while in the performance of duties. There are no minimum age or service requirements. The member must file his or her application prior to attaining statutory "maximum age."

Retirement Allowance: 72% of salary plus an annuity based on accumulated member contributions, with interest. This amount is not to exceed 100% of pay. For those who became members in service after January 1, 1988 or who have not been members in service continually since that date, the amount is limited to 75% of pay. There is an additional pension of \$501.36 per year (or \$312.00 per year in systems in which the local option contained in G.L. c. 32, s.7(2)(b)(iii) has not been adopted), per child who is under 18 at the time of the member's retirement, with no age limitation if the child is mentally or physically incapacitated from earning. The additional pension may continue up to age 21 for any child who is a full time student at an accredited educational institution. Those who became members in service after January 1, 1988 or who have not been members in service continually since that date.

SECTION X  
SUMMARY OF PLAN PROVISIONS (Continued)

**ACCIDENTAL DEATH**

Eligibility: Applies to members who die as a result of a work-related injury or if the member was retired for accidental disability and the death was the natural and proximate result of the injury or hazard undergone on account of which such member was retired.

Allowance: An immediate payment to a named beneficiary equal to the accumulated deductions at the time of death, plus a pension equal to 72% of current salary and payable to the surviving spouse, dependent children or the dependent parent, plus a supplement of \$312 per year, per child, payable to the spouse or legal guardian until all dependent children reach age 18 or 21 if a full time student, unless mentally or physically incapacitated.

The surviving spouse of a member of a police or fire department or any corrections officer who, under specific and limited circumstances detailed in the statute, suffers an accident and is killed or sustains injuries resulting in his death, may receive a pension equal to the maximum salary for the position held by the member upon his death. In addition, an eligible family member may receive a one time payment of \$100,000.00 from the State Retirement Board.

**DEATH AFTER ACCIDENTAL DISABILITY RETIREMENT**

Effective November 7, 1996, Accidental Disability retirees were allowed to select Option C at retirement and provide a benefit for an eligible survivor. For Accidental Disability retirees prior to November 7, 1996, who could not select Option C, if the member's death is from a cause unrelated to the condition for which the member received accidental disability benefits, a surviving spouse will receive an annual allowance of \$6,000 until remarriage or death.

**DEATH IN ACTIVE SERVICE :**

Eligibility: At least 2 years of service

Allowance: An immediate allowance equal to that which would have been payable had the member retired and elected Option C on the day before his or her death. For death occurring prior to the member's superannuation retirement age, the age 55 benefit rate is used. The minimum annual allowance payable to the surviving spouse of a member in service who dies with at least two years of creditable service is \$3,000, provided that the member and the spouse were married for at least one year and living together on the member's date of death.

The surviving spouse of such a member in service receives an additional allowance equal to the sum of \$1,440 per year for the first child and \$1,080 per year for each additional child until all dependent children reach age 18 or 22 if a full time student, unless mentally or physically incapacitated.

SECTION X  
SUMMARY OF PLAN PROVISIONS (Continued)

**COST OF LIVING**

If a system has accepted Chapter 17 of the Acts of 1997, and the Retirement Board votes to pay a cost of living increase for that year, the percentage is determined based on the increase in the Consumer Price Index used for indexing Social Security benefits, but cannot exceed 3.0%. The first \$12,000 of a retiree's total allowance is subject to a cost-of-living adjustment. The total Cost-of-Living adjustment for periods from 1981 through 1996 is paid for by the Commonwealth of Massachusetts.

**METHODS OF PAYMENT**

A member may elect to receive his or her retirement allowance in one of 3 optional forms of payment.

Option A: Total annual allowance, payable in monthly installments, commencing at retirement and terminating at the member's death.

Option B: A reduced annual allowance, payable in monthly installments, commencing at retirement and terminating at the death of the member, provided, however, that if the total amount of the annuity portion received by the member is less than the amount of his or her accumulated deductions, including interest, the difference or balance of his accumulated deductions will be paid in a lump sum to the retiree's beneficiary or beneficiaries of choice.

Option C: A reduced annual allowance, payable in monthly installments, commencing at retirement. At the death of the retired employee,  $\frac{2}{3}$  of the allowance is payable to the member's designated beneficiary (who may be the spouse, or former spouse who remains unmarried for a member whose retirement becomes effective on or after February 2, 1992, child, parent, sister, or brother of the employee) for the life of the beneficiary. For members who retired on or after January 12, 1988, if the beneficiary pre-deceases the retiree, the benefit payable increases (or pops up) to the amount which would have been payable under Option A. Option C became available to accidental disability retirees on November 7, 1996.

**ALLOCATION OF PENSION COSTS** : If a member's total creditable service was partly earned by employment in more than one retirement system, the cost of the "pension portion" is allocated between the different systems pro rata based on the member's service within each retirement system.



SECTION XI  
GLOSSARY OF TERMS

**ACTUARIAL ACCRUED LIABILITY** That portion of the Actuarial Present Value of pension plan benefits which is not provided by future Normal Costs or employee contributions. It is the portion of the Actuarial Present Value attributable to service rendered as of the Valuation Date.

**ACTUARIAL ASSUMPTIONS** Assumptions, based upon past experience or standard tables, used to predict the occurrence of future events affecting the amount and duration of pension benefits, such as: mortality, withdrawal, disablement and retirement; changes in compensation; rates of investment earnings and asset appreciation or depreciation; and any other relevant items.

**ACTUARIAL COST METHOD (or FUNDING METHOD)** A procedure for allocating the Actuarial Present Value of all past and future pension plan benefits to the Normal Cost and the Actuarial Accrued Liability.

**ACTUARIAL GAIN OR LOSS (or EXPERIENCE GAIN or LOSS)** A measure of the difference between actual experience and that expected based upon the set of Actuarial Assumptions, during the period between two Actuarial Valuation dates.

Note: The effect on the Accrued Liability and/or the Normal Cost resulting from changes in the Actuarial Assumptions, the Actuarial Cost Method or pension plan provisions would be described as such, not as an Actuarial Gain (Loss).

**ACTUARIAL PRESENT VALUE** The dollar value on the valuation date of all benefits expected to be paid to current members based upon the Actuarial Assumptions and the terms of the Plan.

**AMORTIZATION PAYMENT** That portion of the pension plan appropriation which represents payments made to pay interest on and the reduction of the Unfunded Accrued Liability.

**ANNUAL STATEMENT** The statement submitted to PERAC each year that describes the asset holdings and Fund balances as of December 31 and the transactions during the calendar year that affected the financial condition of the retirement system.

**ANNUITY RESERVE FUND** The fund into which total accumulated deductions, including interest, is transferred at the time a member retires, and from which annuity payments are made.

**ANNUITY SAVINGS FUND** The fund in which employee contributions plus interest credited are held for active members and for former members who have not withdrawn their contributions and are not yet receiving a benefit (inactive members).

SECTION XI  
GLOSSARY OF TERMS (Continued)

**ASSETS** The value of securities as described in Section VIII.

**COST OF BENEFITS** The estimated payment from the pension system for benefits for the fiscal year. This is the minimum amount payable during the first six years of some Funding Schedules.

**EXPENSE FUND** The fund into which the appropriation for administrative expenses is paid and from which all such expenses are paid.

**FUNDING SCHEDULE** The schedule based upon the most recently approved actuarial valuation which sets forth the amount which would be appropriated to the pension system in accordance with Section 22D of M.G.L. Chapter 32.

**GASB** Governmental Accounting Standards Board

**NORMAL COST** Total Normal Cost is that portion of the Actuarial Present Value of pension plan benefits which is to be paid in a single fiscal year. The Employee Normal Cost is the amount of the expected employee contributions for the fiscal year. The Employer Normal Cost is the difference between the Total Normal Cost and the Employee Normal Cost.

**PENSION FUND** The fund into which appropriation amounts as determined by PERAC are paid and from which pension benefits are paid.

**PENSION RESERVE FUND** The fund which shall be credited with all amounts set aside by a system for the purpose of establishing a reserve to meet future pension liabilities. These amounts would include excess interest earnings.

**SPECIAL FUND FOR MILITARY SERVICE CREDIT** The fund which is credited with amounts paid by the Franklin County Retirement Board equal to the amount which would have been contributed by a member during a military leave of absence as if the member had remained in active service of the Franklin County. In the event of retirement or a non-job related death, such amount is transferred to the Annuity Reserve Fund. In the event of termination prior to retirement or death, such amount shall be transferred to the Pension Fund.

**UNFUNDED ACCRUED LIABILITY** The excess of the Actuarial Accrued Liability over the Assets.